

Amendments to the Claims

Please amend the claims as shown below.

1. (Canceled).
2. (Canceled).
3. (Canceled).
4. (Canceled).
5. (Currently Amended) A method of performing budgetary consistency checks between a hierarchical working budget database in a first data storage area and a hierarchical reference budget database in a second data storage area in a computer system, comprising:
 - iteratively receiving a budget item, at the computer system, for entry into the working budget database, wherein the budget item is represented by a value;
 - executing, by a rules manager, one or more rules ~~related to the budget item stored in a rules array data structure~~ related to the received budget item, the rules including a working budget address field containing ~~pointers to an address to an entry located at least entries at the one of a node and sub-node levels subordinate node level~~ within the hierarchical working budget database in the first data storage area, and a reference budget address field containing an address to an entry located at least a pointer to entries at a node level within the hierarchical reference budget database in the second data storage area, a test field containing a definition of a test relationship between the ~~entries pointed to in the~~ value stored in the addressed entry located in the hierarchical working budget database and the value of the addressed entry pointed to located in the hierarchical reference budget database, and a field containing a definition of a response that is a function of the test relationship, the executing comprising:
 - retrieving data related to the received budget item from the ~~entry~~ entries in the working budget database corresponding to the address pointed to by the ~~pointers~~ in the working budget address field;
 - retrieving data from the entry in the reference budget database ~~pointed to by the pointers~~ corresponding to the address in the reference budget address field;

identifying elements within the working budget database that are to be changed by the new budget item, if the new budget item is posted into the working budget database, and

identifying a subset of rules that apply to the identified elements;

applying only the test relationship in the subset of rules to the retrieved data and the received budget item;

determining the result of the test relationship between the data related to the budget item from the working budget database in the first storage area and the data related to the budget item from the entry from the reference budget database ~~pointed to in~~based on the test relationship rule, and outputting a response defined by the response definition;

if any test relationship rule generates an error response according to the response definition, blocking the budget item from being saved to the working budget database;
and

otherwise, saving the received budget item in the working budget database.

6. (Currently Amended) This method of claim 5, further comprising, pursuant to execution of a rule, performing aggregation of addressed entries from ~~sub-nodes~~subordinate nodes of the hierarchical working database according to a definition provided in the rule, an aggregate value obtained therefrom being used to determine if the test relationship is satisfied.

7. (Original) The method of claim 5, further comprising pursuant to execution of a rule, performing aggregation of addressed entries of the reference database, according to a definition provided in the rule, an aggregate value obtained therefrom being used to determine if the test relationship is satisfied.

8. (Original) The method of claim 5, further comprising, if any rule generates a warning, posting an alert as specified in the response definition of the corresponding rule.

9. (Canceled) .

10. (Canceled).

11. (Canceled).

12. (Canceled).

13. (Canceled).

14. (Canceled).

15. (Currently Amended) A computer readable medium in which are stored program instructions that when executed, cause a financial management system to:

receive, at the financial management system comprising a hierarchical working budget database in a first data storage area and a hierarchical reference budget database in a second data storage area, a budget item for entry into the working budget database, wherein the budget item is represented by a value;

execute, by a rules manager, one or more rules ~~related to the budget item~~ stored in a rules array data structure related to the received budget item, wherein the rules array data structure is stored separately from the working budget database and the reference budget database, the rules including a working budget address field containing ~~pointers to an address of an entry located at least at one of a node level and sub-node~~ a subordinate node level entries within the hierarchy of the working budget database and a reference budget address field containing ~~an address of an entry located at least at one of an entry located at least~~ pointers to entries at a node level within the hierarchy of the reference budget database, a test definition field containing a definition of a test relationship between the entries in the working budget and the entries in the reference budget and a response field containing a definition of a response that is a function of the test relationship, the executing comprising:

retrieving data values related to the budget item from the ~~entries-entry~~ in the working budget database ~~pointed to by the pointers~~ corresponding to the address in the working budget address field;

retrieving data values from the entry in the reference budget database ~~pointed to by the pointers~~ corresponding to the address in the reference budget address field;

identifying elements within the working budget database that are to be changed by the new budget item, if the received budget item is posted into the working budget database, and identifying a subset of rules that apply to the identified elements;

applying only the test relationship in the subset of rules to the retrieved data and the received budget item;

determining the output of the test relationship by comparing the data values of the received budget item ~~pointed to in the working budget database in the first storage area and~~ the data value of the entry ~~pointed to in~~ retrieved from the reference budget ~~data~~ database, and outputting a response according to the response definition;

if any rule generates an error response according to the response definition, block the budget item from the working budget database; and

otherwise, update the working budget database with the received budget item.

16. (Previously Presented) The computer readable medium of claim 15, wherein the program instructions further cause the financial management system, if any rule generates a warning, to post an alert as specified in the response definition of the corresponding rule.

17. (Canceled).

18. (Previously Presented) The method of claim 5, wherein the executing comprises:

storing in a test field a definition of a relationship that must be met between data values from the first data structure and data values from the second data structure to satisfy the rule, and

storing in a response field a definition of an action to occur if the relationship is not satisfied.

19. (Canceled).

20. (Canceled).

21. (Previously Presented) The method of claim 18, the executing comprises:

entering an indication, contained in at least one rule, recursively across a plurality of sets of locations of the first and second budget database, and the working budget address field identifies the sets of locations.

22. (Previously Presented) The method of claim 18, the executing comprises:

accessing a test field for definition of an aggregation rule contained in at least one rule to the locations specified in the respective address field.

23. (Currently Amended) A financial management system, comprising:

- a working budget hierarchical database storage device storing a working budget database having ~~an~~-amendable budget items, wherein the budget items are represented by a value;

- a reference budget hierarchical database storage device, separate from the working budget database storage device, storing reference budget database having reference budget items in a hierarchy, the reference budget items having a value and corresponding to the budget items of the working budget stored in the working budget database;

- a terminal for receiving a budget item for entry into the working budget database;

- a rules array data structure, separate from the working budget hierarchical database and the reference budget hierarchical database, storing a plurality of rules including rules related to the budget item, the rules including a working budget address field containing ~~pointers to~~addresses of entries within different levels of the hierarchy of the working budget hierarchical database and a reference budget address field containing ~~pointers to~~addresses of reference budget items within different levels of the hierarchy of the reference budget hierarchical database, a test field containing a definition of a test relationship that between the entries in the working budget and the entries in the reference budget and a response field containing a definition of a response that is a function of the test relationship;

- a processor executing one or more of the plurality of rules stored in the rules array, the processor configured to:

- retrieve values of the received budget item from the addresses of entries in the working budget database ~~pointed to by the pointers~~based on the addresses in the working budget address field;
 - retrieving values from the entry in the reference budget based on the addresses~~database pointed to by the pointers~~ in the reference budget address field;
 - identifying elements within the working budget database that are to be changed by the new budget item, if the received budget item is posted into the working budget database, and identifying a subset of rules that apply to the identified elements;
 - applying the test relationship in the subset of rules to the retrieved data; and

a display connected to the terminal and the processor for indicating that the received budget item is blocked from being ~~saved~~posted to the working budget database if any rule generates an error response according to a response definition in the executed rule.

24. (Currently Amended) The system of claim 23, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, the reference budget address field contains ~~pointers pointing to~~addresses of all of the nodes in at least one of the different levels of the reference budget database, and a single rule applies to all entries at that level.

25. (Currently Amended) The method of claim 5, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, the reference budget address field contains ~~pointers pointing to~~addresses of all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

26. (Currently Amended) The computer readable medium of claim 15, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, the reference budget address field contains ~~pointers pointing to~~addresses of all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

27. (Currently Amended) The system of claim 23, wherein the ~~pointers to~~addresses of the entries in the working budget database are used to retrieve working budget values are also used to retrieve reference budget values from the reference budget database for application of a rule.

28. (Currently Amended) The method of claim 5, wherein the ~~addresses of~~pointers to the entries in the working budget database are used to retrieve working budget values are also used to retrieve reference budget values from the reference budget database for application of a rule.

29. (Currently Amended) The computer readable medium of claim 15, wherein the addresses of pointers to the entries in the working budget database to retrieve working budget values are also used to retrieve reference budget values from the reference budget database for application of a rule.